

Amendments to the Specification

Please replace the Title of the invention on page 1, with the following rewritten Title:

METHODS FOR CONTROLLING METHOD-OF-REGULATING-PHOSPHORYLATION-OF
SR PROTEIN PHOSPHORYLATION, AND ANTIVIRAL AGENTS WHOSE ACTIVE
INGREDIENTS COMPRISE AGENTS THAT CONTROL-COMPRISE SR PROTEIN
ACTIVITY-REGULATOR AS THE ACTIVE INGREDIENT

Please insert the following new heading and paragraph on page 1, immediately following the title:

--CROSS REFERENCE TO RELATED APPLICATIONS

This is the U.S. National Stage of International Application No. PCT/JP2004/019393, filed December 24, 2004 which in turn claims the benefit of Japan Application No. 2003-435085, filed December 26, 2003. Both of these applications are incorporated herein by reference in their entirety.--

Please replace the paragraph beginning at page 1, line 19, with the following rewritten paragraph:

For example, in the case of HIV virus, methods targeting the characteristics of the HIV genome are used. HIV's RNA genome is converted into DNA (provirus) by reverse transcriptase, and is then integrated into host chromosomes. Then, the transcription and translation mechanisms of the host cells produce viral proteins from the proviral DNA. These proteins are ~~transcribed~~expressed as large polypeptide precursors. The precursors are cleaved into proteins by proteases, and then HIV virus is re-constituted and matured. Thus, HIV inhibitors targeted to each step in this HIV maturation process have been studied and developed; such inhibitors include (1) AZT and the like, which are targeted at reverse transcriptases

characteristic of retroviruses (Non-patent Document 1) and (2) protease inhibitors, which inhibit proteases (Non-patent Document 2).

Please replace the paragraph beginning at page 4, line 20, with the following rewritten paragraph:

[9] the antiviral agent of [8], wherein the SRPK gene expression inhibitor is an miRNA, siRNA, or morpholino oligo targeting an SRPK, or an expression vector for the miRNA or ~~siRNA~~siRNA;

Please replace the paragraph beginning at page 19, line 25, with the following rewritten paragraph:

[M15] the method of [M6], in which the step of inhibiting an expression or activity of a SRPK is the step of introducing a SRPK miRNA, siRNA or morpholino oligo, or introducing an miRNA or ~~siRNA~~siRNA expression vector;

Please replace the paragraph beginning at page 22, line 6, with the following rewritten paragraph:

[U15] the use of [U6], in which the compound that inhibits an expression or activity of a SRPK is a SRPK miRNA, siRNA or morpholino oligo, or is an miRNA or ~~siRNA~~siRNA expression vector;

Please replace the paragraph beginning at page 38, line 20, with the following rewritten paragraph:

In this step, compound 1a is reacted with compound 2a to give compound 3a. The material "nitrobenzene derivative 1a" may be available commercially or by appropriately inducing functional groups. Ha1-X is a halogen atom or sulfonate used as a leaving group. Compound 2a is a reagent comprising the $-\text{NR}^5\text{R}^6$ to be introduced. ~~X is a hydrogen atom or such.~~ It is preferable to use one to two equivalents of compound 2a. The reaction may be conducted in a solvent in the presence of a base.

Please replace the paragraph beginning at page 38, line 26, with the following rewritten paragraph:

It is possible to use triethylamine, diisopropyl ethylamine, pyridine, 4-(dimethylamino)pyridine, or such as the base. It is preferable to use one to five equivalents of base. Alternatively, an excess amount (one to five equivalents) of ~~X-NR⁵R⁶~~ H-NR⁵R⁶ may be used as the base.

Please replace the paragraph beginning at page 40, line 14, with the following rewritten paragraph:

The bases include, for example, triethylamine, diisopropyl ethylamine ~~diisopropylamine~~, pyridine, and 4-(dimethylamino) pyridine. It is preferable to use one to five equivalents of the base.

Please replace the paragraph beginning at page 74, line 4, with the following rewritten paragraph:

The protein sample was analyzed using Western blotting. The sample was fractionated by SDS-PAGE using ~~Laemini~~-Laemmli buffer and gel with a gradient of 4% to 20% at 40 mA for 45 minutes. Molecular weights were determined using Broad Range Pre-stained Marker (02525-35; Nacalai) as a molecular weight marker. Then, the sample was transferred onto PROTRAN Nitrocellulose Membrane (BA85; purchased from Schleicher & Schuell BioScience) by semi-dry blotting using TransBlot SD Cell (170-3940; purchased from Bio-Rad) at 160 mA for 60 minutes. After blotting, the membrane was washed with TBS for five minutes with shaking. Then, the membrane was blocked with BlockingOne (03953-95; purchased from Nacalai) at room temperature for one hour. The membrane was washed again with TBS, and incubated at 4°C overnight with mouse monoclonal antibody 104 (Mab104; hybridoma was purchased from ATCC), mouse anti-SC35 antibody (S4045; purchased from BDTransduction), and mouse anti-SF2 monoclonal antibody (AK103: a gift from Dr. Adrian Krainer; Hanamura, A. *et al.*, 1998, RNA 4:430-444; Kojima, T. *et al.*, 2001, J. Biol. Chem. 276:32247-56), which each recognize phosphorylated SR proteins and were diluted with TBS.

Please insert the attached Abstract as the last page of the specification.

Attachment: Abstract.